The local coordination of europium in vitreous Eu metaphosphate has been investigated, using information obtainable from crystalline EuP$_3$O$_9$. One glassy sample and one crystalline sample of nominal EuP$_3$O$_9$ composition were examined by X-ray diffraction. The description of the close coordination of Eu, deduced from the orthorhombic structure of the crystalline sample, was used as a model for the amorphous situation. Besides, as a monoclinic form of Eu metaphosphate is also reported to exist, a second model was deduced from this structure, starting from the isomorphous monoclinic Yb metaphosphate. Best fitting calculations indicated that orthorhombic coordination is the better model for the short range order of europium in the vitreous metaphosphate.